**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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| Appl. No. | : | 10/706,707 | Confirmation No. | 8602 |
| Applicant | : | Dean Lee Saghier | | |
| Filed | : | 11/12/2003 | | |
| Title | : | METHOD FOR MODELING SYSTEM PERFORMANCE | | |
| Group Art Unit | : | 2857 | | |
| Examiner | : | Patrick J. Assouad | | |
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| Customer No. | : | 32423 | | |

Mail Stop Amendment
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

**AMENDMENT**

Sir:

In response to the Office Action mailed May 30, 2006, please amend the above-identified application as follows:

**Amendments to the Claims** are reflected in the listing of claims which begins on page 2 of this paper.

**Remarks/Arguments** begin on page 12 of this paper.

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-4. (cancelled)

5. (currently amended) ~~The method for modeling the performance of a system of claim 4, the method further comprising:~~ A method for modeling the performance of a system comprising computing software operating on computing hardware, the method comprising:

measuring a first system parameter of the system;

modeling the first system parameter as a non-linear curve;

measuring a second system parameter of the system;

modeling the second system parameter as a non-linear curve;

defining a relationship between the first system parameter and the second system parameter; and

displaying the curve modeling the first system parameter and the curve modeling the second system parameter on a single graph.

6-17. (cancelled)

18. (currently amended) ~~The method for modeling the performance of a system of claim 17, further comprising:~~ A method for modeling the performance of a system comprising computer software operating on computer hardware, the method comprising:

measuring system throughput data points and system response time data points at predetermined times, each data point corresponding to a system load;

storing system throughput data points and system response time data points;

modeling system throughput as a function of load by fitting a non-linear curve to the stored system throughput data points at predetermined times comprising fitting a logarithmic curve to the system throughput data points;

modeling system response time as a function of load by fitting a non-linear curve to the stored system response time data points at predetermined times comprising fitting an exponential curve to the system response time data points;

defining a linear relationship between system response time and system throughput, such that a distance may be calculated by subtracting the value at a given load of the exponential curve fit to the plurality of response time data points from the value at that given load of the logarithmic curve fit to the plurality of throughput data points;

determining the optimal system load, the optimal system load being the load at which the distance between exponential curve fit to the plurality of response time data points and the logarithmic curve fit to the throughput data points is maximized;

defining a load range above the optimal load; and

issuing an alarm when the system load exceeds the load range.

19. (cancelled)

20. (currently amended) ~~The method for modeling the performance of a system of claim 19, further comprising:~~ A method for modeling the performance of a system comprising computer software operating on computer hardware, the method comprising:

measuring system throughput data points and system response time data points at predetermined times, each data point corresponding to a system load;

storing system throughput data points and system response time data points;

modeling system throughput as a function of load by fitting a non-linear curve to the stored system throughput data points at predetermined times comprising fitting a logarithmic curve to the system throughput data points;

modeling system response time as a function of load by fitting a non-linear curve to the stored system response time data points at predetermined times comprising fitting an exponential curve to the system response time data points;

defining a maximum acceptable response time for the system;

determining the maximum system load using the exponential curve fitted to the response time data points, the maximum system load being the load at which the maximum acceptable response time is reached;

determining the maximum system throughout using the logarithmic curve fitted to the throughput data points, the maximum system throughput being the system throughput at the maximum system load; and

issuing an alarm when the system load reaches the maximum system load.

21. (currently amended) ~~The method for remodeling the performance of a system of claim 19, further comprising:~~ A method for modeling the performance of a system comprising computer software operating on computer hardware, the method comprising:

measuring system throughput data points and system response time data points at predetermined times, each data point corresponding to a system load;

storing system throughput data points and system response time data points;

modeling system throughput as a function of load by fitting a non-linear curve to the stored system throughput data points at predetermined times comprising fitting a logarithmic curve to the system throughput data points;

modeling system response time as a function of load by fitting a non-linear curve to the stored system response time data points at predetermined times comprising fitting an exponential curve to the system response time data points;

defining a maximum acceptable response time for the system;

determining the maximum system load using the exponential curve fitted to the response time data points, the maximum system load being the load at which the maximum acceptable response time is reached;

determining the maximum system throughout using the logarithmic curve fitted to the throughput data points, the maximum system throughput being the system throughput at the maximum system load; and

issuing an alarm when the system throughput reaches the maximum system throughput.

22. (currently amended) ~~The method for modeling the performance of a system of claim 19, further comprising:~~ A method for modeling the performance of a system comprising computer software operating on computer hardware, the method comprising:

measuring system throughput data points and system response time data points at predetermined times, each data point corresponding to a system load;

storing system throughput data points and system response time data points;

modeling system throughput as a function of load by fitting a non-linear curve to the stored system throughput data points at predetermined times comprising fitting a logarithmic curve to the system throughput data points;

modeling system response time as a function of load by fitting a non-linear curve to the stored system response time data points at predetermined times comprising fitting an exponential curve to the system response time data points;

defining a maximum acceptable response time for the system;

determining the maximum system load using the exponential curve fitted to the response time data points, the maximum system load being the load at which the maximum acceptable response time is reached;

determining the maximum system throughout using the logarithmic curve fitted to the throughput data points, the maximum system throughput being the system throughput at the maximum system load; and

issuing an alarm when the system response time reaches the maximum acceptable response time for the system.

23-34. (cancelled)

35. (currently amended) ~~The computer readable media of claim 34, wherein the method for modeling the performance of a system further comprises:~~ A computer readable media containing embodied thereon computer readable code for causing a computer to perform a method for modeling the performance of a system comprising computing software operating on computing hardware, the method comprising:

measuring system throughput data points and system response time data points at predetermined times, each data point corresponding to a system load;

storing system throughput data points and system response time data points;

modeling system throughput as a function of load by fitting a non-linear curve to the stored system throughput data points at predetermined times comprising fitting a logarithmic curve to the system throughput data points;

modeling system response time as a function of load by fitting a non-linear curve to the stored system response time data points at predetermined times comprising fitting an exponential curve to the system response time data points;

defining a linear relationship between system response time and system throughput, such that a distance may be calculated by subtracting the value at a given load of the exponential curve fit to the plurality of response time data points from the value at that given load of the logarithmic curve fit to the plurality of throughput data points;

determining the optimal system load, the optimal system load being the load at which the distance between exponential curve fit to the plurality of response time data points and the logarithmic curve fit to the throughput data points is maximized;

defining a load range above the optimal load; and

issuing an alarm when the system load exceeds the load range.

36. (cancelled)

37. (currently amended) ~~The computer readable media of claim 36, wherein the method for modeling the performance of a system further comprises:~~ A computer readable media containing embodied thereon computer readable code for causing a computer to perform a method for modeling the performance of a system comprising computing software operating on computing hardware, the method comprising:

measuring system throughput data points and system response time data points at predetermined times, each data point corresponding to a system load;

storing system throughput data points and system response time data points;

modeling system throughput as a function of load by fitting a non-linear curve to the stored system throughput data points at predetermined times comprising fitting a logarithmic curve to the system throughput data points;

modeling system response time as a function of load by fitting a non-linear curve to the stored system response time data points at predetermined times comprising fitting an exponential curve to the system response time data points;

defining a linear relationship between system response time and system throughput, such that a distance may be calculated by subtracting the value at a given load of the exponential curve fit to the plurality of response time data points from the value at that given load of the logarithmic curve fit to the plurality of throughput data points;

determining the optimal system load, the optimal system load being the load at which the distance between exponential curve fit to the plurality of

response time data points and the logarithmic curve fit to the throughput data points is maximized;

defining a load range above the optimal load;

issuing an alarm when the system load exceeds the load range;

defining a maximum acceptable response time for the system;

determining the maximum system load using the exponential curve fitted to the response time data points, the maximum system load being the load at which the maximum acceptable response time is reached;

determining the maximum system throughout using the logarithmic curve fitted to the throughput data points, the maximum system throughput being the system throughput at the maximum system load; and

issuing an alarm when the system load reaches the maximum system load.

38. (currently amended) ~~The computer readable media of claim 36, wherein the method for modeling the performance of a system further comprises:~~ A computer readable media containing embodied thereon computer readable code for causing a computer to perform a method for modeling the performance of a system comprising computing software operating on computing hardware, the method comprising:

measuring system throughput data points and system response time data points at predetermined times, each data point corresponding to a system load;

storing system throughput data points and system response time data points;

modeling system throughput as a function of load by fitting a non-linear curve to the stored system throughput data points at predetermined times comprising fitting a logarithmic curve to the system throughput data points;

modeling system response time as a function of load by fitting a non-linear curve to the stored system response time data points at predetermined times comprising fitting an exponential curve to the system response time data points;

defining a linear relationship between system response time and system throughput, such that a distance may be calculated by subtracting the value at a given load of the exponential curve fit to the plurality of response time data points from the value at that given load of the logarithmic curve fit to the plurality of throughput data points;

determining the optimal system load, the optimal system load being the load at which the distance between exponential curve fit to the plurality of response time data points and the logarithmic curve fit to the throughput data points is maximized;

defining a load range above the optimal load;

issuing an alarm when the system load exceeds the load range;

defining a maximum acceptable response time for the system;

determining the maximum system load using the exponential curve fitted to the response time data points, the maximum system load being the load at which the maximum acceptable response time is reached;

determining the maximum system throughout using the logarithmic curve fitted to the throughput data points, the maximum system throughput being the system throughput at the maximum system load; and

issuing an alarm when the system throughput reaches the maximum system throughput.

## REMARKS/ARGUMENTS

Reconsideration of the present application is respectfully requested. Claims 1-4, 6-17, 19, 23-34 and 36 have been cancelled. Claims 5, 18, 20-22, 35, 37 and 38 have been amended to overcome the objection stated by the Examiner in the Office Action. The claims have been re-written in independent form including all of the limitations of the base claims and any intervening claims.

In the Office Action dated May 30, 2006, Fig. 4 of U.S. Patent No. 5,848,270 to DeLuca et al. is considered pertinent to Applicant's disclosure. The reference has been overcome and does not disclose Applicant's claimed invention.

## CONCLUSION

For the reasons stated above, claims 5, 18, 20-22, 35, 37 and 38 are now in condition for allowance. Applicant respectfully requests withdrawal of the pending objections and allowance of claims 5, 18, 20-22, 35, 37 and 38. If any issues remain that would prevent issuance of this application, the Examiner is urged to contact the undersigned by telephone prior to issuing a subsequent action. The Commissioner is hereby authorized to charge any additional amount required (or to credit any overpayment) to Deposit Account No. 21-0765.

Dated: June 21, 2006

Respectfully submitted,

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